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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,869	08/26/2002	Jeffrey S. Brown	BUR920010223	6165

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IBM MICROELECTRONICS
INTELLECTUAL PROPERTY LAW
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EXAMINER

WEISS, HOWARD

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 08/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,869

Applicant(s)

BROWN ET AL.

Examiner

Howard Weiss

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Attorney's Docket Number: BUR920010223
Filing Date: 8/26/02
Continuing Data: none
Claimed Foreign Priority Date: none
Applicant(s): Jeffrey et al. (David, Edward, Beth)

Examiner: Howard Weiss

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1, 2, 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crafts (U.S. Patent No. 6,064,588) and Iizuka et al. (U.S. Patent No. 4,641,165).

Crafts shows most aspects of the instant invention (e.g. Figures 3 to 8) including:

- first **50c** and second **60t** transfer devices each having body regions including channel regions **74** and first **72** and second **76** diffused electrodes and gate electrodes **70**
- a differential storage capacitor **62c,62t** with at least one node in electrical contact with the first and second electrode of the transfer devices

Crafts does not explicitly show the primary capacitance of the storage capacitor being at least approximately 5 times the inherent capacitances of said capacitor. Iizuka et al. teach (e.g. Figures 5 and 6) to make the primary capacitance C_2 of the storage capacitor to be at least approximately 5 times the inherent capacitances C_1 (Column 5 lines 5 to 59) to prevent soft-errors (Column 3 Lines 40 to 42). It would have been obvious to a person of ordinary skill in the art at the time of invention to make the primary capacitance of the storage capacitor to be at least approximately 5 times the inherent capacitances as taught by Iizuka et al. in the device of Crafts to prevent soft-errors.

3. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crafts and Iizuka et al., as applied to Claim 1 above, and further in view of Tashiro (U.S. Patent No. 5,241,211).

Crafts and Iizuka et al. show most aspects of the instant invention (Paragraph 2) except for the SOI substrate. Tashiro teaches (e.g. Column 1 Lines 14 to 23) to use SOI substrates to reduce parasitic capacitances. It would have been obvious to a person of ordinary skill in the art at the time of invention to use an SOI substrate as taught by Tashiro in the device of Crafts and Iizuka et al. to reduce parasitic capacitances.

4. Claims 6, 7 and 10 to 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crafts and Iizuka et al., as applied to Claim 1 above, and further in view of Choi et al. (DRC 2000).

Crafts and Iizuka et al. show most aspects of the instant invention (Paragraph 2) except for the features of the transfer devices and the storage capacitor disposed on rails of semiconductor material. Choi et al. teach (e.g. Figure 1) to form semiconductor devices using semiconductor rails to reduce parasitic capacitance and resistance (see Conclusion section on Page 23). It would have been obvious to a person of ordinary skill in the art at the time of invention to form semiconductor devices using semiconductor rails as taught by Choi et al. in the device of Crafts and Iizuka et al. to reduce parasitic capacitance and resistance.

Response to Arguments

5. Applicant's arguments with respect to Claims 1 to 16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

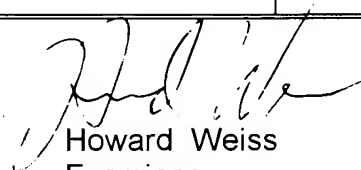
6. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. Papers should be faxed to Art Unit 2814 via the Art Unit 2814 Fax Center located in Crystal Plaza 4, room 3C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is **(703) 308-7722** or **-7724**. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications. The official TC2800 Before-Final, **(703) 872-9318**, and After-Final, **(703) 872-9319**, Fax numbers will provide the fax sender with an auto-reply fax verifying receipt of their fax by the USPTO.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard Weiss at **(703) 308-4840** and between the hours of 8:00 AM to 4:00 PM (Eastern Standard Time) Monday through Friday or by e-mail via **Howard.Weiss@uspto.gov**. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 2800 Receptionist at **(703) 308-0956**.

Art Unit: 2814

8. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass(es): 257/297	thru 7/29/03
Other Documentation: none	
Electronic Database(s): EAST, IEL	thru 7/29/03

HW/hw
29 July 2003


Howard Weiss
Examiner
Art Unit 2814